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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/548,087	06/20/2006	Ivan Ivanov	006681.00003	2100
22907 7590 11/06/2007 BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051			EXAMINER NGUYEN, NGA X	
			ART UNIT 3662	PAPER NUMBER
			MAIL DATE 11/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/548,087	Applicant(s) IVANOV ET AL.	
	Examiner NGA X. NGUYEN	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/06/05</u> . | 6) <input type="checkbox"/> Other: ____ |

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show descriptive labels for the boxes in Fig. 1, Fig.5, Fig.6 & Fig.7 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- Line 16-18, Power Supply Block is not shown in any figure and not discussed in the specification.
- Line 9, what is the driving block doing? There is no discuss on this part

Claim Rejections - 35 USC § 103

With regard to claim 1, Hsiung discloses:

- Sensors for angular velocity, which sense the rotation of the antenna around its axes (see column 4, lines 3-20).
- Sensors for measuring the inclination of the antenna toward vertical axis (see column 4, lines 3-21)..
- Control block, which calculates the necessary correction of the direction of antenna beam, which is connected to output of sensors and with inputs of driving block, and block for electronic beam control (see column 4, lines 42-64).
- A motor for changing the orientation of the antenna (see column 4, lines 45-50).

Park discloses:

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- Sensors for angular velocity, which sense the rotation of the antenna around its axes (see column 7, lines 54-55).
- Block for electronic beam control, which is connected with the antenna panel (see column 8, lines 38-53).
- Power Supply block which converts the voltage from the electrical network of the vehicle into suitable values for providing power supply to all blocks of the system (see column 7, lines 63-67)

It would have been obvious to modify Hsiung by incorporating the teaching of Park's device to have a block for electronic beam control and power supply so as to provide the tracking system power supplies and control its beam to be always directed toward the satellite broadcasting.

With regard to claim 2, Hsiung teaches the three angular velocity sensors are used, which are collinear to the axes of Cartesian coordinate system, fixed with antenna panel (see column 4, lines 10-15).

With regard to claim 3, Hsiung teaches using information from sensors, a forward coordinate transformation is performed for obtaining necessary corrections of azimuth and elevation of antenna panel as well as reverse coordinate transformation for applying corrections of offsets of angular velocity sensors (see column 6, lines 7-29).

With regard to claim 4, Hsiung teaches that axes of two of angular velocity sensors lie in the plane in which the beam of antenna panel is tilted, while the axis of the third angular velocity sensor is orthogonal to this plane (see column 3-4, lines 34-21).

With regard to claim 5, Hsiung teaches:

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- The antenna panel performs mechanical scanning by one axis (see column 4, lines 45-46).
- The antenna beam is positioned by electronic control at fixed position at the other axis (see column 4, lines 46-50).
- The signal strength from two or more positions in a close proximity to direction towards the satellites is used for calculation of correction of offsets of angular velocity sensors and for fine adjustment in orientation of antenna beam by the block for electronic beam control (see column 4, lines 50-64).

With regard to claim 6, Park teaches that electronic beam control holds the beam, which is closest to current satellite direction for maximum allowable time, while holding the beam in the neighboring positions is for minimal time, which provides minimum decreasing of average strength of received signal (see column 9-11, lines 40-34).

With regard to claim 7, Hsiung teaches that the angular velocity sensors which axes lie in a plane to horizontal plane is applied (see column 4, lines 42-50).

With regard to claim 8, Hsiung teaches that the output values of angular velocity sensors which axes lie in a plane to horizontal plane are integrated for a certain time interval and when the result from integration is positive the offset of corresponding sensor is corrected by a certain step in positive direction or when the result from integration is negative the offset of corresponding sensor is corrected a certain step in a negative direction (see column 6, lines 7-29).

With regard to claim 9, Hsiung teaches that the output values of angular velocity sensors which axes lie in a plane to horizontal plane are converted into angular

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velocities, which vector lie in the horizontal plane, which angular velocities are integrated for obtaining inclination angles of axes of the previous angular velocity sensors, and the obtained inclination angles are compared with measurements from inclinometer, which sense the inclination of aforementioned axes toward horizontal plane and the result from this comparison is used for adjustment of offsets of aforementioned angular velocity sensors (see column 3-4, lines 63-64).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGA X. NGUYEN whose telephone number is 571-272-5217. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TARCZA H. THOMAS can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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NXN

A handwritten signature in black ink, appearing to read "Thomas H. Tarcza". The signature is fluid and cursive, with the first name "Thomas" being more prominent than the last name "Tarcza".

THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600